SCIENCE.

FRIDAY, AUGUST 13, 1886.

COMMENT AND CRITICISM.

CONSIDERABLE INTEREST has of late been taken in the study of the etiology of pneumonia. Some believe it to be due, in the majority of cases, to microbes, and base this opinion upon the discovery of four varieties of micro-organisms in lungs affected with the disease; others find a marked relation between its prevalence and the increased amount of ozone in the air, either just at the time or immediately preceding. Dr. Seibert has made a study of 768 cases of primary pneumonia, which were reported to him by the members of the New York medical society, and which occurred in their practice during twelve months. These cases were distributed as follows: January, 71; February, 140; March, 103; April, 73; May, 55; June, 37; July, 26; August, 25; September, 43; October, 62; November, 65; December, 78. The results of Dr. Seibert's investigations are, 1°, that the varying prevalence of pneumonia may be explained by changes in temperature, humidity, and velocity of the winds; and, 2°, that, whenever there exists a low or falling temperature with excessive and increasing humidity and high winds, pneumonia prevails to its greatest extent. If two of these conditions exist without the third, the disease will be markedly prevalent, but not so much so as in the preceding instance. Catarrhal troubles are also favored by the same conditions.

THERE HAS RECENTLY BEEN PUBLISHED a biography of Se-Quo-Yah, styled the American Cadmus. Born in 1770, of a Cherokee mother whose European husband had deserted her, he grew up as the pride of his people, both in games and war. One day (so the story goes) a white captive produced a letter, and everybody wondered at the 'talking leaf.' Se-Quo-Yah (which translates suspiciously into 'he guessed it') pondered over the mystery, and with the use of an English spelling-book which had fallen into his hands (but which of course he could not read), invented a written alphabet for his people, making the English characters, with modifications and additions of his own, stand for the eighty-two syllables of which the Cherokee language is composed. He analyzed the spoken speech, and had each distinct syllable represented by a sign. His tribe at first considered him as weak-minded, but eventually recognized the utility of his invention. Five years after the invention he had a school with many scholars, and a printing press was publishing a Cherokee paper, part of which was printed in the Se-Quo-Yah alphabet. This invention is referred to as the means of civilizing the Cherokee nation. The story is unfortunately not sufficiently clear to enable one to appreciate just how much of the idea was original with Se-Quo-Yah, or to claim for him the honor of doing by a flash of genius what in other races had been slowly worked out before history began.

IT IS A PREVALENT popular impression that some special providence surrounds the physician with protective agencies, and that, although daily exposed to disease in its most malignant forms, he escapes when others are attacked. Dr. Ogle of England finds that while the lawyers die at the rate of 20, the clergy at the rate of 16, the doctors' mortality is 25 per 1,000. In a million adults other than physicians, 16 died of scarlet-fever, 14 of diphtheria, and 238 of typhoid-fever; while, of an equal number of physicians, 59 succumbed to scarlet-fever, 59 to diphtheria, and 311 to typhoid-fever. Small-pox, on the other hand, claims more victims among the laity than in the medical profession; due, doubtless, to the fact that physicians have sufficient confidence in the protective influence of vaccination to keep themselves insusceptible to the attacks of small-pox.

DR. LINCOLN, in the 'Report of the Massachusetts state board of health for 1884,' says that a child who enters a public school has become a fractional part of a machine. He has been well understood by persons who have watched him from birth, and who are deeply interested in him. He is now transferred to the care of strangers, who meet with him only five hours in the day, and whose interest in him is restricted by the fact that he forms but a portion — say, from one and one-tenth to two and one-half per cent — of the

total group of children that is intrusted to the care of the teacher. He is held by the teacher, and then passed on to another again as a fraction, and not as an integer. Does he not lose much, as well as gain, by this system? As regards his health, he loses that defence which the sympathy of the community always extends to that individual who is suffering conspicuously. Taken generally, all children in school are suffering from discomfort. Average this discomfort among ten thousand, and it may not be very great for each one; but a class of fifty children is not made up of fifty averages.

THE AMERICAN ASSOCIATION AS A MISSIONARY BODY.

Two years ago we published some statistics concerning the membership of the American association which were somewhat curious. The figures then given dealt simply with the geographical distribution of the members; and they showed, among other things, that one-third of the association came from the states of New York and Massachusetts. If the north-eastern states, that is, New England and the Atlantic states to the Virginia line, had been counted, it would have been found that these included fully three-fifths of the association.

It could also be shown that during the last ten years, when only four of the ten meetings have been held in the north-eastern states, the average attendance of members from this section has been 53 per cent of the whole attendance, increased to 76 per cent when the meetings have been held within its own territory. It has even been larger than the territorial representation in two instances, as at the St. Louis meeting of 1878, when it was larger than the representation of all the states west of the Mississippi; and at the Montreal meeting of 1882, when it was five times as large as the entire Canadian membership present. At the other extra-territorial meetings, where its proportion of the total attendance has varied from 24 per cent to 37 per cent, it has easily held the second place, though falling below the local representation of large areas. Indeed, the representation of no other section, excepting of the northern states lying east of the Mississippi and west of the Atlantic states, ever has more than a passing importance, viz., when the meeting is held in that section. Thus Canada's representation has never been more than 3 per cent of the whole in any meetings of the last ten years, excepting in 1882, when it was held in Montreal and the percentage rose to 14 per cent; the next year however it fell to 2 per cent, and, omitting 1882, the average has been less than 2 per cent. In this same period the states west of the Mississippi have averaged a little more than 4 per cent, and have never reached 6 per cent, excepting when the meeting was held at St. Louis in 1878, when it rose to 31 per cent, and at Minneapolis in 1883, when it was 15 per cent. The southern states have done better than this, for at the Nashville meeting in 1877 their average was 57 per cent of the whole, and though at no other time (even at St. Louis) have they exceeded 12 per cent, their general average, apart from the Nashville meeting, has been over 6 per cent.

It is, however, a matter of practical importance, in deciding where a meeting shall be held, to know how large a general attendance of members to expect, and here the statistics show some further significant facts. The general proportion of members in attendance to total membership during the past ten years has been 30½ per cent, but the proportion has varied enormously, as may be seen by the following serial figures, from 1876 down: Buffalo 25 per cent; Nashville 17 per cent; St. Louis 14 per cent; Saratoga 25 per cent; Boston 63 per cent; Cincinnati 27 per cent; Montreal 48; Minneapolis 20 per cent; Philadelphia 49 per cent; Ann Arbor 17 per cent. While it should not be forgotten that it is one part of the association's work to look upon the meetings as in some sort a missionary enterprise, neither should it be overlooked, when it is asked to hold an undue proportion of its meetings away from the centres where it gains its main financial and moral support, that such assemblies are held *in partibus infidelium*.

It might be sagacious to institute an inquiry as to the length of time for which new members, gathered in from the district immediately surrounding a place of meeting, are held. That membership changes largely from year to year is a well known fact; that it is largely recruited from the places where the meetings are held is sufficiently obvious to any constant attendant. But what shall we say when we discover that Buffalo, which a month hence can point to itself with pride as the only city which has harbored the association for a third time; that Buffalo, situated in the region which these statistics have shown is most favorable for science, where two or three local societies for the cultivation of the natural sciences have sprung up, where scientific periodicals have found a home and a patronage; that Buffalo, renowned for its hospitality to science, literature, and art, where ten short years ago the association was enlarged by nearly one hundred and fifty members, twenty-five of them its own citizens, —